UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/965,292	09/27/2001	Bret S. Weber	01-221	3852

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EXAMINER
MEUCCI, MICHAEL D

ART UNIT	PAPER NUMBER
2142	

DATE MAILED: 07/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>30 March 2005</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>14 February 2002</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All   b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Note: This application (09/965292) has been reassigned to Michael Meucci.

Response to Arguments

2.   Applicant's arguments with respect to claims 1-18 have been considered but are

moot in view of the new ground(s) of rejection. Because new grounds of rejection are

being applied, this action is **non-final**.

Response to Amendment

3.   Examiner acknowledges amendments made to overcome objections to the

drawings and specification in the office action dated 30 December 2004.

4.   Examiner acknowledges amendments made to overcome 35 U.S.C. 112

rejections in the office action dated 30 December 2004.

Claim Rejections - 35 USC § 112

5.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

6.   Claims 1 and 10 rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

As per claims 1 and 10, the amended limitation "to form a new translated

command different from the command" on lines 6-7 of each claim would include subject

matter not supported by the specification. Such embodiments include, for example:

translating a read command into a write command; or in general, translating a command

into another command that performs a completely different task or generates a different

end result. Correction is required.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

8.   Claims 1, 5, 7, 10, 14, and 16 rejected under 35 U.S.C. 103(a) as being

unpatentable over Reshef et al. (U.S. 6,321,337 B1) hereinafter referred to as Reshef in

view of Perlman et al. (U.S. 5,309,437) hereinafter referred to Perlman.

        a.   As per claims 1 and 10, Reshef teaches: presetting buffers in an internal

subnet, wherein the buffers route external commands to a plurality of devices within the

internal subnet (lines 19-45 of column 16); receiving a command from an external

subnet to the internal subnet (lines 44-60 of column 6); translating the command to form

a new translated command different from the command, and sending the new translated

command to an internal device within the internal subnet, as determined by the buffers

(lines 9-18 of column 13); and performing the new translated command within the

internal subnet (lines 19-26 of column 13).

Reshef does not explicitly teach: the internal subnet appears as a single device to the external subnet. However, Perlman discloses: "From outside the extended network, there appears to be just a single network, i.e. there is one network identifier in the network layer address, and messages destined for a host computer within the extended network are addressed as if this were the case," (lines 58-63 of column 4). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have the internal subnet appear as a single device to the external subnet. "The need for an alternative to bridges and routers is particularly critical in an "extended network" administered by a single institution. For example, a corporation or a university may have the need to configure a number of "subnets" or "network segments" that are interconnected into one extended network," (lines 53-58 of column 4 in Perlman). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have the internal subnet appear as a single device to the external subnet in the system as taught by Reshef.

b.   As per claims 5 and 14, Reshef teaches: initiating a translation mapping for an internal subnet, wherein the translation mapping associates external command addresses with internal device addresses (line 60 of column 3 through line 3 of column 4); receiving a command from an external subnet to the internal subnet (lines 44-60 of column 6); translating the command address and sending the command to an internal device address of the internal subnet, as determined by the translation mapping (lines 59-61 of column 1 and lines 9-18 of column 13); and performing the command (lines 19-26 of column 13).

Reshef does not explicitly teach: the internal subnet appears as a single device to the external subnet, as each of a plurality of devices within the internal subnet are accessed by the external subnet using a same network address. However, Perlman discloses: "From outside the extended network, there appears to be just a single network, i.e. there is one network identifier in the network layer address, and messages destined for a host computer within the extended network are addressed as if this were the case," (lines 58-63 of column 4). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have the internal subnet appear as a single device to the external subnet, as each of a plurality of devices within the internal subnet are accessed by the external subnet using a same network address. "The need for an alternative to bridges and routers is particularly critical in an "extended network" administered by a single institution. For example, a corporation or a university may have the need to configure a number of "subnets" or "network segments" that are interconnected into one extended network," (lines 53-58 of column 4 in Perlman). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have the internal subnet appear as a single device to the external subnet, as each of a plurality of devices within the internal subnet are accessed by the external subnet using a same network address in the system as taught by Reshef.

c.   As per claims 7 and 16, Reshef teaches: the external and internal subnets are comprised of different architectures (lines 24-26 of column 2, lines 20-26 of column 4, and particularly line 61 of column 4 through line 21 of column 7).

9.   Claims 2, 4, 8, 11, 13, and 17 rejected under 35 U.S.C. 103(a) as being unpatentable over Reshef and Perlman as applied to claims 1, 5, 10, and 14 respectively above, in view of Catiller et al. (U.S. 4,428,043) hereinafter referred to as Catiller.

    a.   As per claims 2 and 11, Reshef does not explicitly teach: sending a message to the external subnet indicating a completion status of the command. However, Catiller discloses: "By using an I/O descriptor command and a data link task identifier, a main host computer can initiate a network support processor to receive data from a selected remote terminal or to send data to a selected remote terminal, after which the network support processor will provide a result descriptor message together with a task identifier word in order to notify the main system of the completion or incompletion of that particular task," (lines 12-20 of column 4). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to send a message to the external subnet indicating a completion status of the command. "The main host computer operates on a routine whereby I/O commands are conveyed to a front-end processor for execution after which the front-end processor will return a "result descriptor" word or words to the main computer in order to indicate completion of the task or any exception conditions," (lines 10-16 of column 6 in Catiller). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to send a message to the external subnet indicating a completion status of the command in the system as taught by Reshef and Perlman.

b.   As per claims 4, 8, 13, and 17, Reshef does not explicitly teach: the

method is performed in an endnode that originated and finally consumes messages in a

system area network. However, Catiller discloses: "By using an I/O descriptor

command and a data link task identifier, a main host computer can initiate a network

support processor to receive data from a selected remote terminal or to send data to a

selected remote terminal, after which the network support processor will provide a result

descriptor message together with a task identifier word in order to notify the main

system of the completion or incompletion of that particular task," (lines 12-20 of column

4). It would have been obvious to one of ordinary skill in the art at the time of the

applicant's invention to have the method performed in an endnode that originates and

finally consumes messages in a system area network. "The main host computer

operates on a routine whereby I/O commands are conveyed to a front-end processor for

execution after which the front-end processor will return a "result descriptor" word or

words to the main computer in order to indicate completion of the task or any exception

conditions," (lines 10-16 of column 6 in Catiller). It is for this reason that one of ordinary

skill in the art at the time of the applicant's invention would have been motivated to have

the method performed in an endnode that originates and finally consumes messages in

a system area network in the system as taught by Reshef and Perlman.

10.   Claims 3, 9, 12, and 18 rejected under 35 U.S.C. 103(a) as being unpatentable

over Reshef and Perlman as applied to claims 1, 5, 10, and 14 respectively above, in

view of Catiller and Nielson et al. (U.S. 5,619,642) hereinafter referred to as Nielson.

As per claims 3, 9, 12, and 18, Reshef does not explicitly teach: the method is performed in an endnode that originated and finally consumes messages in a system area network. However, Catiller discloses: "By using an I/O descriptor command and a data link task identifier, a main host computer can initiate a network support processor to receive data from a selected remote terminal or to send data to a selected remote terminal, after which the network support processor will provide a result descriptor message together with a task identifier word in order to notify the main system of the completion or incompletion of that particular task," (lines 12-20 of column 4). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have the method performed in an endnode that originates and finally consumes messages in a system area network. "The main host computer operates on a routine whereby I/O commands are conveyed to a front-end processor for execution after which the front-end processor will return a "result descriptor" word or words to the main computer in order to indicate completion of the task or any exception conditions," (lines 10-16 of column 6 in Catiller). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have the method performed in an endnode that originates and finally consumes messages in a system area network in the system as taught by Reshef and Perlman.

Reshef does not explicitly teach: the command is a RAID read/write command. However, Nielson discloses: "Under the control of the resident processor (not shown) the bus interface 20a is conditioned to accept RAID commands, e.g. a RAID write request or a RAID read request," (lines 27-30 of column 4). It would have been obvious

to one of ordinary skill in the art at the time of the applicant's invention to have the command be a RAID read/write command. "The resident processor controls the components of the RAID controller based on the received request. For example, when a RAID write request is received, the bus interface 20a, and RAM controller 40a are conditioned to accept the received write data, and place it in the main RAM 60 and shadow RAM 80," (lines 30-35 of column 4 in Nielson). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have the command be a RAID read/write command in the system as taught by Reshef and Perlman.

11.   Claims 6 and 15 rejected under 35 U.S.C. 103(a) as being unpatentable over Reshef and Perlman as applied to claims 5 and 14 respectively above, in view of Nielson.

As per claims 6 and 15, Reshef does not explicitly teach: the internal device is a RAID storage controller. However, Nielson discloses: "The resident processor controls the components of the RAID controller based on the received request," (lines 30-32 of column 4). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to utilize a RAID storage controller as an internal device. "For example, when a RAID write request is received, the bus interface 20a, and RAM controller 40a are conditioned to accept the received write data, and place it in the main RAM 60 and shadow RAM 80," (lines 32-35 of column 4 in Nielson). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have

been motivated to utilize a RAID storage controller as an internal device in the system

as taught by Reshef and Perlman.

Conclusion

12.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Elko et al. (U.S. 5,317,739) discloses coupling data processing system.

Searls (U.S. 5,333,277) discloses data bus interface and expansion system.

Woest (U.S. 5,444,851) discloses accessing configured nodes in system with

non-configured device.

Alexander, Jr. et al. (U.S. 6,178,171 B1) discloses route switching mechanisms

for source-routed ATM networks.

Golden et al. (U.S. 6,272,127 B1) discloses network for providing switched

broadband multipoint intercommunication.

Bharat et al. (U.S. 6,286,006 B1) discloses finding mirrored hosts by analyzing

URLs.

Mendelson et al. (U.S. 6,343,083 B1) discloses supporting a connectionless

communication protocol over and ATM network.

Millet et al. (U.S. 6,434,627 B1) discloses IP network for accommodating mobile

users with incompatible network addressing.

Eichstaedt et al. (U.S. 6,662,230 B1) discloses system for dynamically limiting

robot access to server data.

Cain et al. (U.S. 6,754,219 B1) discloses modular routing system.

Murphy (U.S. 2002/0120706 A1) discloses determining master or slave mode in a storage server subnet.

13.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Meucci at (571) 272-3892. The examiner can normally be reached on Monday-Friday from 9:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell, can be reached at (571) 272-3868. The fax phone number for this Group is 571-273-8300.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [michael.meucci@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free).

BEATRIZ PRIETO
PRIMARY EXAMINER